

R208 – SPECIFIC REQUIREMENTS: CONSTRUCTION MATERIALS TESTING

LABORATORY ACCREDITATION PROGRAM

June 2007

This document describes the accreditation requirements applicable to the A2LA Construction Materials Testing (CMT) Field which is designed to meet the needs of users looking for competent construction materials testing services. Internationally accepted accreditation criteria and guidance documents developed by ASTM committees form the basis for accrediting laboratories under this field.

One of the major objectives of A2LA is to provide regulators responsible for approving CMT laboratories and other users of accredited laboratories with an effective alternative for evaluating and recognizing competent laboratories. A2LA is committed to working with federal, state and commercial organizations to realize this objective.

The scope of this field includes the following materials areas: concrete and aggregates, cement, soils, bituminous materials, roofing materials, masonry, steel, and nondestructive tests as related to construction. Applications for accreditation may be made for one or more tests in each area. Additional areas may be added upon request.

As an option, a laboratory may also obtain accreditation for one or more of the following construction materials engineering standards:

ASTM E329	Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
ASTM C1077	Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM D3666	Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials
ASTM D3740	Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soils and Rock as Used in Engineering Design and Construction
ASTM C1093	Practice for Accreditation of Testing Agencies for Unit Masonry
ASTM E1212	Practice for Establishment and Maintenance of Quality Control Systems for Nondestructive Testing Agencies
ASTM E543	Practice for Evaluating Agencies that Perform Nondestructive Testing
ASTM A880	Practice for Criteria for Use in Evaluation of Testing Laboratories and Organizations for Examination and Inspection of Steel, Stainless Steel and Related Alloys

When accredited for one of these engineering standards, the laboratory's scope of accreditation shall indicate "Construction Materials Engineering".

GENERAL CRITERIA

The general criteria for accreditation are contained in ISO/IEC 17025:2005, “General requirements for accreditation of testing and calibration laboratories”, as referenced in Part A of the green booklet entitled, R101 - General Requirements: Accreditation of ISO/IEC 17025 Laboratories.

SPECIFIC CRITERIA

Specific criteria are generally an elaboration on or interpretation of the general criteria plus those requirements of accreditation applicable to a certain field of testing, testing technology, type of test, or specific test. The specific criteria for the CMT field are based on the applicable requirements of the specific standards for which accreditation is sought. CMT testing laboratories seeking accreditation for mobile or field testing must also meet the additional criteria outlined in R104 – General Requirements: Accreditation of Site Testing and Site Calibration Laboratories.

PROFICIENCY TESTING

Applicants under this field are required to participate in a proficiency testing program in each of the major areas of construction materials testing related to a laboratory's scope of accreditation (see below), administered by other organizations acceptable to A2LA. In addition, the laboratories must participate in any proficiency testing mentioned in the engineering standards, such as ASTM C1077, D3666, C1093, and D3740.

Enrollment in the following programs (twice per year) related to a laboratory's scope of accreditation satisfies this requirement.

Proficiency Sample Programs of the Cement and Concrete Reference Laboratory

(For further information, contact: Robin Haupt, 301-975-6704.)

- A. Concrete - Applicable Standards: ASTM C39, C138, C143, C173, and C192.
- B. Cement - Applicable Standards: ASTM C109, C114, C115, C151, C185, C186, C187, C188, C191, C204, C266, C430, and C451.
- C. Masonry - Applicable Standards: ASTM C91, C109, C151, C185, C187, C188, and C266.

Proficiency Sample Programs of the AASHTO Materials Reference Laboratory

(For further information, contact: Peter Spellerberg, 301-975-6704.)

(AASHTO equivalent standards are in parentheses after each ASTM designation)

- D. Bituminous - Applicable Standards: ASTM D5 (AASHTO T49), D70 (T228), D92 (T48), D1754 (T179), D2042 (T44), D2170 (T201), D2171 (T202), D2872 (T240).
- E. Soils - Applicable Standards: ASTM D422 (AASHTO T88), D698 (T99), D854 (T100), D2844 (T190), D4318 (T89 & T90).

F. Aggregate - Applicable Standards: ASTM C88 (AASHTO T104), C117 (T11), C127 (T85), C128 (T84), C131 (T96), C136 (T27).

G. Bituminous Concrete - Applicable Standards: ASTM D5 (AASHTO T49), D1559 (T245), D1560 (T246), D1856 (T170), D2041 (T209), D2170 (T201), D2171 (T202), D2172 (T164), D2726 (T166), D3203 (T269), D5444 (T30).

If a laboratory's results are deemed outliers or unacceptable (ratings of "0," "1," or "2" for the above programs), then the laboratory shall promptly investigate and determine the cause(s) for such unacceptable results, correct any problems identified, and report to A2LA the outcome of such investigations.

Document Revision History

Date	Description
June 29, 2001	General Criteria updated to reference ISO/IEC 17025. Document Revision History section added. No other changes made.
September 13, 2005	Updated to reference ISO 17025:2005
June 14, 2007	Updated unacceptable (ratings of "0" or "1" for the above programs) to (ratings of "0," "1," or "2" for the above programs)

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